

Primary Examiner Griffin:

This is in response to an outstanding Office Action in the above-identified application mailed April 18, 2003, with a shortened statutory period for response of three (3) months, set to
5 expire July 18, 2003.

Assistant Commissioner for Patents is authorized to withdraw any additional moneys required for this purpose from Deposit Account No. 01-0528.

Please enter the following amendments.

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IN THE CLAIMS

Please cancel, without prejudice, Claims 1 to 11, inclusive, and Claim 13.

Kindly enter new Claims 21 to 25 to read as follows:

15 21. A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

hydrotreating a petroleum distillate consisting essentially of material boiling between about 50° C. and about 425° C. by a process
20 which includes reacting the petroleum distillate with a source of hydrogen at hydrogenation conditions in the presence of a hydrogenation catalyst to assist by hydrogenation removal of sulfur and/or nitrogen from the hydrotreated petroleum distillate;

fractionating the hydrotreated petroleum distillate by distillation
25 to provide at least one low-boiling blending component consisting of a sulfur-lean, mono-aromatic-rich fraction, and a high-boiling feedstock consisting of a sulfur-rich, mono-aromatic-lean fraction;

contacting at least a portion of the high-boiling feedstock with an immiscible aqueous phase comprising at least one organic peracid or
30 precursors of organic peracid, in a liquid reaction mixture maintained

substantially free of catalytic active metals and/or active metal-containing compounds and under conditions suitable for oxidation of one or more of the sulfur-containing and/or nitrogen-containing organic compounds at temperatures in a range upward from about 50°
5 C. to about 150° C.;

separating at least a portion of the immiscible peracid-containing phase from the reaction mixture to recover an essentially organic phase from the reaction mixture; and

10 treating at least a portion of the recovered organic phase with a solid sorbent, an ion exchange resin, and/or a suitable immiscible liquid containing a solvent or a soluble basic chemical compound, to obtain a product containing less sulfur and/or less nitrogen than the feedstock.

22. The process according to claim 21 wherein the conditions
15 of oxidation include temperatures in a range upward from about 80° C. to about 125° C. and sufficient pressure to maintain the reaction mixture substantially in a liquid phase.

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23. The process according to claim 21 further comprising
20 treating at least a portion of the separated peracid-containing phase to remove and at least a portion of the sulfur-containing and nitrogen-containing organic compounds and water contained therein, and thereafter recycling to the reaction mixture at least a portion of the treated peracid-containing phase having a water content of less than 60 percent by volume.

24. The process according to claim 21 wherein the high-boiling oxidation feedstock consists essentially of material boiling between about 200° C. and about 425° C.

25. The process according to claim 21 further comprising
30 blending the product containing less sulfur and/or less nitrogen than the oxidation feedstock with at least a portion of the blending